

VOLUME 9 NUMBER 2

APRIL 1992

TAMING THE SC-1043 BRICK

By John, WA8EOY

Dave, W8AER, asked me if I would fix his mast mounted 1260 MHz transmitter. The transmitter consists of a P.C. Electronics test oscillator which has an output of 50mw at 1240-1300 MHz modulated for AM or FM. This unit is matched to a SC-1043 brick which develops a 5 watt output at 50 ohms and is a common arrangement in the ranks of ATVers.

This combination of units has a reputation of being unstable and changes frequency at random, and Dave's unit was no exception. Improvement of this condition is made by replacing the capacitor that tunes the strip line of the oscillator with a piston capacitor. I did this only to find that the unit would output only 1050 or 1350 MHz. I disconnected the oscillator from the brick and ran it independently. I set it at 1280 MHz and ran it for 30 minutes. The change was only 216 kHz. Then I reconnected the oscillator to the brick and found that the output was 1350 MHz! I then found a place on the oscillator board where I could read its frequency, and it was 1280 MHz! Therefore, since I found that the brick was oscillating under drive conditions, it should be replaced.

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The ATCO Newsletter is the official publication of a group of television amateurs known as "AMATEUR TELEVISION IN CENTRAL OHIO" and is published in January, April, July, and October.

Membership in ATCO is open to any FCC licensed radio amateur who has an interest in amateur television.

Any publication of material printed in the ATCO Newsletter without the written consent of ATCO is prohibited.

NEW ATCO MEMBER

We welcome Chris, WH6FL, who recently received his Technician license. His QTH is Aiea HI (near Honolulu) and is the ATCO Newsletter Editor's grandson. Chris insisted on paying his dues so he could be included on our roster as an ATCO member.

HOME TV VIA SATELLITE

Thomson Consumer Electronics, maker of RCA and GE televisions, recently announced that it would help launch a satellite-to-home TV broadcasting system through a venture with the Hughes Electronic division of General Motors Corp. Thomson, owned by French electronics concern Thomson SA, will make the satellite receiving dishes, TV set decoders, and other technology for the system, scheduled to go into operation in early 1994. The system, called DirecTV, will be capable of providing more than 100 channels to 18-inch satellite dishes installed outside homes.

DAYTON HAMVENTION ATV FORUM

The Dayton Hamvention ATV Forum will be held on Saturday 25 April 1992 in Room 3 from 2:45 to 5:00 p.m. Moderator will be Tom O'Hara, W6ORG.

Program subjects and those making presentation follows:

"Getting Started in Amateur Television" - Bill Parker, W8DMR
"Spectrum Management Problems Relative to ATV" - Tom O'Hara, W6ORG

"Balloon, Rocket, and R/C ATV Updates" - Bill Brown, WB8ELK, and Bob Rau, N8IYD

"Handi Lookie Shoot-out" - An open show and tell contest

ATV REFERENCE BOOK PUBLISHED

ATCO member Henry, KB9FO, has recently published "ATV Secrets" Volume I which is a highly condensed essence of ATV operations and technical information about receivers, transmitters, how to DX, and more. The book contains articles written by several contributors to Amateur Television Quarterly Magazine (ATVQ) and includes an article written by Bill, W8DMR.

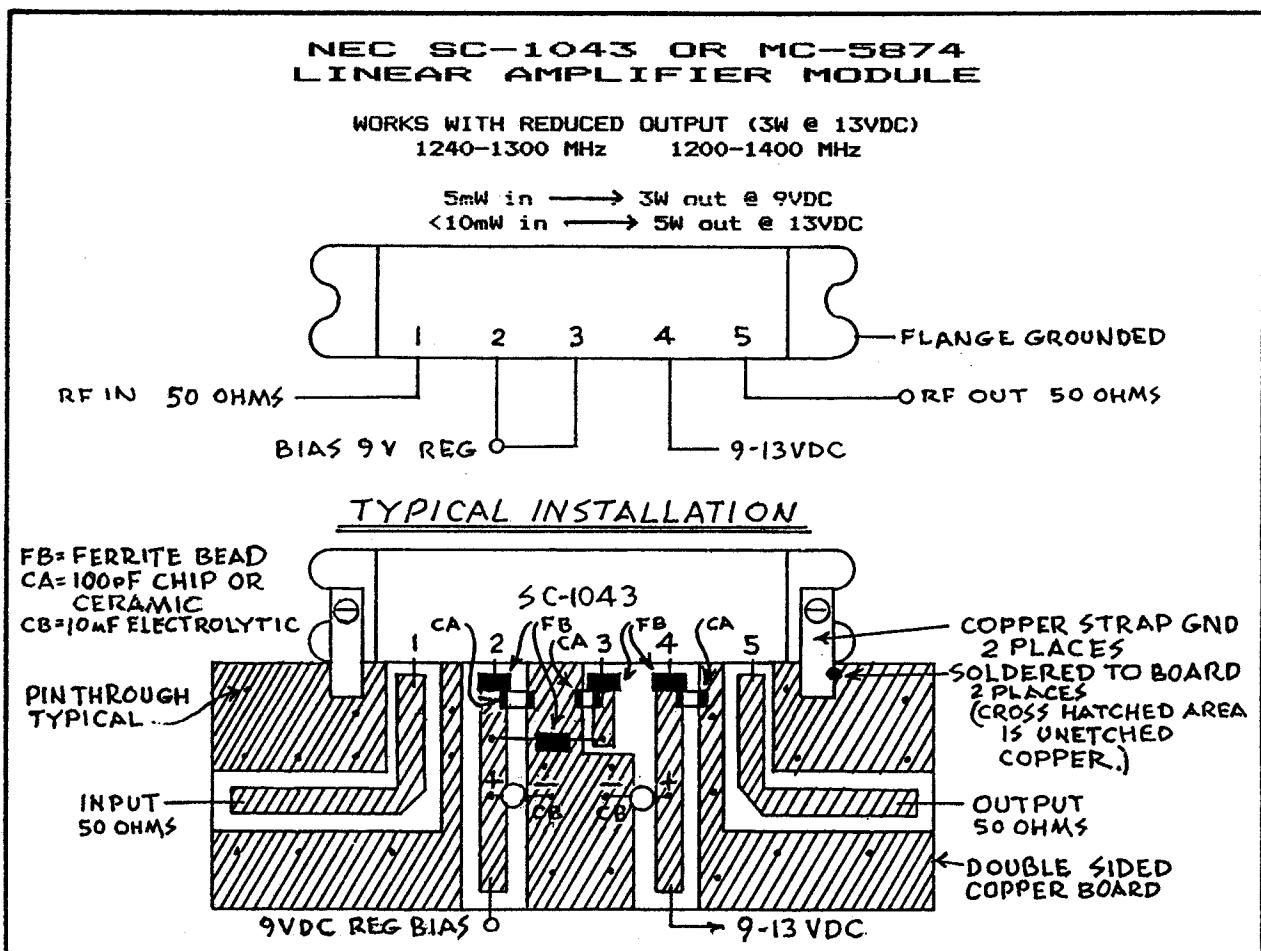
The book is available from ATVQ, 1545 Lee St., Des Plaines IL 60018. The postpaid price is \$11.50.

TAMING THE SC-1043 BRICK

(continued from page 1)

Based on my findings, Dave decided to purchase a SC-1043 from Down East Microwave and a different schematic diagram than previously used came with it. The schematic is included with this article. The basic difference shown on the new schematic is that pin 2 and pin 3 are wired together close to the brick terminals with a ferrite bead on the wire. Chip capacitors are used but not necessary; electrolytics are smaller in value, and bias voltage is 9 vdc as opposed to 7 vdc. I rewired Dave's unit as shown in the schematic accompanying this article, and the results were astounding!

The unit was tested at 1262.3 MHz, 11 vdc, and 5 watts output for 30 minutes. The results were that the frequency had drifted down 1.1 MHz, the brick's temperature was ambient, and the heat sink was just warm. I hope that this new schematic will help ATVers to get on 1200 MHz television and get Dave, WBAER, on 1200 MHz in the morning sessions.



THE W8BJN PORTABLE ATV STATION

By Gene, W8BJN

After reading about WD5BJW's "Porta Lookie" in ATVO's 1991 Fall Issue (Vol. 4, No. 4, page 34), I decided that it was a pretty good idea and set about to make my own version. I looked around the shack for an enclosure in which to fit all of the parts and came up with an old Magnacord tape recorder carrying case (actually two cases, one held the electronics and the other the tape deck). Both cases have snap-on lids and carrying handles. They have rails to mount 19" equipment, also.

In the smaller of the two cases, a 19" panel was cut to fit my P.C. Electronics ATV transceiver and my Radio Shack three channel wireless microphone receiver. The box also houses a 35 watt Pauldon ATV amplifier. The other case houses three black and white TV monitors, the W8ELK Graphics Generator, 10 amp DC power supply, and switching for the graphics and the live camera. All cables exit through the rear of the two boxes and are out of sight. The portable 11 element ATV antenna, tripod, cables, and color camera all nest in a third box (another old tape recorder case) making all of the equipment very portable.

I am a rooftop manager for a large company in downtown Columbus. The building is 550 feet high, and the roof should provide an excellent location for some really good DX. As of this writing, I have not yet lugged the station up to the rooftop but am looking forward to a nice sunny clear day in the early spring to do so.

DAYTON ATV REPEATER STATUS

Currently, the Dayton Amateur Radio Association (DARA) ATV repeater is undergoing some changes. The DARA ATV group hopes to have the changes completed before the start of the Hamvention to be held from 24 April through 26 April.

A new tower is now under erection, and the first 100 feet of the planned 200-foot tower is nearly completed. DARA has purchased four Lindsay horizontally polarized antenna arrays. Two of the arrays will be used for receiving, the other two are for transmitting. The cost of each antenna array is approximately \$500.

The association held an equipment assembly session on 14 March to build ATV downconverters. More than 15 members constructed, aligned, and tested the 420-450 MHz units. Prior to this session, the same members constructed 13 element Yagi antennas for 70 cm. (Submitted by Bill, W8DMR.)

ATCO MEMBERS AS OF 31 MAR 1992

K8AEH Wilbur Wollerman....	1672 Rosehill Rd.....	Reynoldsburg	43068
W8AER David Sears.....	1678 Kaiser Dr.....	Reynoldsburg	43068
AH2AR David Pelaez.....	4872 Trailside Court.....	Huber Heights	45424
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KB8BIY Bob Shaw.....	59 Parkview Ave.....	Westerville	43081
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W8EHW Foster Warren.....	124 East Clark St.....	North Hampton	45349
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N8FF0 Edward Hauff.....	2716 Columbus Ave.....	Columbus	43209
WH6FL Chris Jacoby....	98-1689 Hapaki St.....	Aiea HI	96701
KB9FD Henry Ruh.....	1545 Lee Street Suite 73.	Des Plaines IL	60018
KB8GZQ Jason Pelaez.....	4872 Trailside Court.....	Huber Heights	45424
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K8JGY Fred Yost.....	330 Dellfield Way.....	Gahanna	43230
N8KCB Chris Morris.....	3181 Gerbert Rd.....	Columbus	43224
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WB8OTH Perry Yantis.....	1850 Lisle Ave.....	Obetz	43207
KE8PN James Easley.....	1507 Michigan Ave.....	Columbus	43201
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WA8RUT Ken Morris.....	3181 Gerbert Rd.....	Columbus	43224
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W8TV Bob Dye.....	6118 Sedgwick Rd.....	Columbus	43235
WB8UGV Bruce Jaquish.....	4817 W. Arlington Park...	Fort Wayne IN	46835
WB8URI William Heiden.....	4435 Kaufman Rd.....	Plain City	43064
KA8WGK Martha Yost.....	330 Dellfield Way.....	Gahanna	43230

ATCO FINANCIAL STATEMENT

Cash balance as of 31 December 1991: \$389.53. Receipts: \$240.00 from dues. Expenditures: printing charges for January 1992 ATCO Newsletter \$23.51; postage for January 1992 ATCO Newsletter \$11.60; miscellaneous costs incidental to publication of newsletter \$8.23; total expenditures \$43.34. Summary: cash balance as of 31 December 1991 \$389.53; receipts \$240.00; expenditures \$43.34; balance as of 31 March 1992 \$586.19.

The above financial report was prepared as of 31 March 1992 by Warren G. Duemmel, KA8GZQ, ATCO Acting Treasurer.

Editor: Warren, KAB6ZD

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ATCO NEWSLETTER

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